

What can we do about Smartphone-addiction – or the dream of a wireless - free digital detox Island?

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Abstract

Since the introduction of wireless technology, digital devices penetrated all strata of the society. Even children use mobile phones regularly and excessively long. Excessive use may be associated with behavioral changes and symptoms of addiction. We analyzed the available literature and define the fields to respond to the association of "screen time" and altered social behavior. There is academic discussion whether the problematic use of smartphones really fulfils all criteria for the diagnosis "Addiction". Considering addiction as a disorder with severe effects on physical and psychological health, it is clear, that the observed behavior has a similar presentation as addiction in terms of excessive use, impulsive control problems and negative consequences. In its socio-cultural context there is a need for research on the underlying neurobiology and mechanisms.

We propose the installation of holiday camps equipped for research activities to study behavioral therapies and at the same time offer immediate help for families or individuals that suffer from modern technology pathologic use. An ideal setting could be a region that abstains from wireless modern technology networks and provides facilities to consume addictive technology under controlled conditions. Currently we are looking for a Greek island that can be dedicated to the project.

Keywords: Smart phones, screen time, change of social behaviour, public health, digital detox

1. Introduction

It has become a question of our age: do children and adolescents spend more time than it is healthy staring at a phone tablet or computer, etc.? Should parents limit their children's access? In the majority of countries children and teenagers have access to a smartphone, and about half of the US teenagers say they are online almost constantly (go.nature.com/2akajas). In the United Kingdom, the time young people spend online has almost doubled over the past decade (go.nature.com/2hd0c4p).

Over the last years the use of smart phone and digital devices for communication and/or gaming increased almost exponentially. The related research covers a wide field ranging from increased or compromised wellbeing, obesity and diabetes, impact on social behavior, reduced sleep quality, depression, anxiety, addiction.

In cases of such significant public concern, it is the responsibility of the scientific community to provide and assess evidence, and then make some recommendations.

2. Methods

To obtain a fair overview of the role and future needs of science in this field, we screened the NIH databank Medline for related entries. Furthermore, we searched for attempts to respond to, and take care of the possible impacts associated with exaggerated screen time. An international and interdisciplinary expert panel evaluated the findings with the aim to propose future research strategies and possible remedies for affected individuals and/or families.

3. Results and Discussion

A selection of the results is shown in the Table 1.

Considering adverse effects associated with screen time in children systematic research started in the 1990ies and grew exponentially since then. Figure 1 shows, that in the last 3 years the average number of publications worldwide is one per week.

In addition to experimental research in telemedicine, research in the following fields show adverse effects of excessive and exaggerated use of smart phones, tablets, computers etc. This includes the systematic documentation of screen time and depression, obesity, diabetes, anxiety, sleep quality, and addiction.

Table 1. Prevalence of publications dealing with a specific aspect of “digital media consumption. The number of reports on experimental use in medicine, and reports of adverse impact on adolescents, teenager, and children

Field of investigation	# scientific reports
Behaviour	> 3400
Social	> 1500
Diabetes	> 400
Depression	> 380
Obesity	> 290
Sleep Quality	> 210
Anxiety	> 200
Addiction	> 200

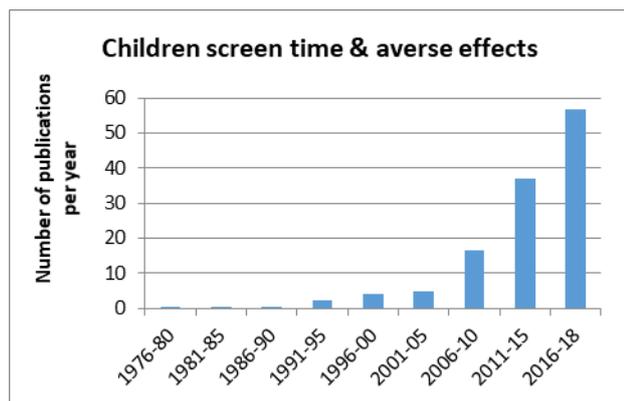


Figure 1. Results from the literature search, while “Children screen time and adverse effects” attracted no interest earlier, since the last 15 years research on adverse effect in children grew dramatically.

4. Conclusion

A reaction to the societal change comes from the WHO, and various international expert groups, who published Guidelines on Physical Activity, Sedentary Behaviour and Sleep for target groups of all ages.

We as the authors propose to maintain a remote environment, which could serve as recreational resort for recreational and/or behavioral therapies, and furthermore facilitate pragmatic research in the field.

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